



Sandia National Laboratories / New Mexico

**PROPOSAL FOR NO FURTHER ACTION
ENVIRONMENTAL RESTORATION PROJECT
SITE 7, GAS CYLINDER DISPOSAL SITE
OPERABLE UNIT 1309**

June 1995

**Environmental
Restoration
Project**



**United States Department of Energy
Albuquerque Operations Office**

PROPOSAL FOR NO FURTHER ACTION

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Operable Unit 1309

SANDIA NATIONAL LABORATORIES/NEW MEXICO



1. Introduction

1.1 ER Site Identification, Number, and Name

Sandia National Laboratories/New Mexico (SNL/NM) is proposing an administrative no further action (NFA) decision for Environmental Restoration (ER) Site 7, Gas Cylinder Disposal (Arroyo del Coyote), Operable Unit (OU) 1309. ER Site 7 is listed in the Hazardous and Solid Waste Amendment (HSWA) Module IV (EPA August 1993) of the SNL/NM Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management Facility Permit (NM5890110518) (EPA August 1992).

1.2 SNL/NM Administrative NFA Process

This proposal for a determination of an administrative NFA decision has been prepared using the criteria presented in Section 4.5.3 of the SNL/NM Program Implementation Plan (SNL/NM February 1994). Specifically, this proposal will "contain information demonstrating that this SWMU has never contained constituents of concern that may pose a threat to human health or the environment" [as proposed in the Code of Federal Regulations (CFR), Section 40 Part 264.51(a) (2)] (EPA July 1990). The HSWA Module IV contains the same requirements for an NFA demonstration:

Based on the results of the RFI [RCRA Facility Investigation] and other relevant information, the Permittee may submit an application to the Administrative Authority for a Class III permit modification under 40 CFR 270.42(c) to terminate the RFI/CMS [corrective measures study] process for a specific unit. This permit modification application must contain information demonstrating that there are no releases of hazardous waste including hazardous constituents from a particular SWMU at the facility that pose threats to human health and/or the environment, as well as additional information required in 40 CFR 270.42(c) (EPA August 1993).

In requesting an administrative NFA decision for ER Site 7, Gas Cylinder Disposal, this proposal is using existing administrative/archival information, recent (1994) interviews and enlarged aerial photographs to satisfy the permit requirements. This unit is eligible for an administrative NFA proposal based on one or more of the following criteria taken from the RCRA Facility Assessment Guidance (EPA October 1986):

- Criterion A: The unit has never contained constituents of concern
- Criterion B: The unit has design and/or operating characteristics that effectively prevent releases to the environment
- Criterion C: The unit clearly has not released hazardous waste or constituents into the environment

Specifically, ER Site 7 is being proposed for an administrative NFA decision because the SWMU has never contained constituents of concern (Criterion A).

1.3 Local Setting

SNL/NM occupies 2,829 acres of land owned by the Department of Energy (DOE), with an additional 14,920 acres of land provided by land-use permits with Kirtland Air Force Base (KAFB), the United States Forest Service (USFS), the State of New Mexico, and the Isleta Indian Reservation. SNL/NM has been involved in nuclear weapons research, component development, assembly, testing, and other nuclear activities since 1945.

The Gas Cylinder Disposal Site is located southwest of Pennsylvania Avenue and southeast of the access road to Technical Area (TA) III and V (Figure 1). The site is adjacent to the southeast end of Site 16, Open Dump. It is enclosed with a fence measuring 400 feet x 450 feet. It is on a terrace above the Arroyo del Coyote flood plain.

2. History of the SWMU

2.1 Sources of Supporting Information

In preparing the request for an administrative NFA decision for ER Site 7, a background study was conducted to collect available and relevant site information. Interviews were conducted with a retired Sandia National Laboratories/New Mexico (SNL/NM) employee and Kirtland Air Force Base (KAFB) staff who are familiar with site operational history.

The following information sources were available for the use in the evaluation of ER Site 7:

- Three interviews and personnel correspondence. Two KAFB employees were recently interviewed (Oct/Nov 1994) who have direct knowledge of activities at Site 7 and an interview was conducted in December 1994 with a retired SNL/NM employee to obtain clarification of his original statement in 1985 about Site 7.
- Fifteen historical aerial photographs spanning 20 years. A detailed study with enlarged aerial photographs was performed in 1994 (Ebert and Associates, 1994).

2.2 Previous Audits, Inspections, and Findings

ER Site 7 was first listed as a potential release site based on the Comprehensive Environmental Assessment and Response Program (CEARP) interviews in 1985 (DOE September 1987), which noted alleged unauthorized dumping and gas cylinder disposal occurred at this site in the mid to late 1970s. The Comprehensive Environmental Response, Compensation, and Liability Act finding was positive; however, no Hazard Ranking System or Modified Hazard Ranking System migration mode score could be calculated due to insufficient information. Subsequent to the CEARP inspection, the U.S. Environmental Protection Agency (EPA) conducted a RCRA Facility Assessment (RFA). This SWMU was not included in the RFA report (EPA April 1987).

2.3 Historical Operations

The site was originally used as a source of gravel and is now a landfill with both covered and uncovered wastes. Visible waste appears to be construction debris.

Historical knowledge of the site is limited; however, gas cylinders allegedly were buried at the site in the mid-to-late 1970s (DOE 1985). Recently, this information has proven incorrect. Recent information indicates that SNL/NM did not dispose of any waste at this site and no gas cylinders were buried at Site 7.

3. Evaluation of Relevant Evidence

3.1 Unit Characteristics

Unit characteristics do not apply to this site.

3.2 Operating Practices

Hazardous wastes were not managed or contained at ER Site 7.

3.3 Presence or Absence of Visual Evidence

The 1987 aerial photograph shows that the site was a large pit (25 feet or deeper). No evidence of disposal along the margins of the pit was evident. Now, the western half of the site is filled to the natural ground level. A partially-filled pit still exists in the eastern part of the site to a depth of approximately 30 to 40 feet.

3.4 Results of Previous Sampling/Surveys

No previous sampling/surveys exist for Site 7.

3.5 Assessment of Gaps in Information

Additional information was obtained because no environmental sampling data exist to verify the absence of waste/gas cylinders.

3.6 Rationale for Pursuing an Administrative NFA Decision

Interpretation of enlarged aerial photographs of Site 7 indicates the following:

- Excavation for sand and gravel first began in 1973.
- By 1975, a large gravel pit had been opened.
- By 1986, the gravel pit was expanded to fit within the present day perimeter fence.

- By 1989, the northern two-thirds of the gravel pit had been backfilled, with some construction debris exposed on the northern wall of the remaining portion of the original pit.
- The surface of the filled portion of the pit has been leveled and now provides surface storage for equipment and containers (Ebert and Associates 1994).

Two recently interviewed employees have direct knowledge of activities at Site 7 beginning in 1980. The following information was communicated by these employees either during a telephone conversation on October 17, 1994, (KAFB employees 1994a) or in a meeting on November 2, 1994 (KAFB employees 1994b):

- The gravel pit was actively mined by SNL/NM and KAFB personnel from 1980 to 1986.¹ KAFB was the sole owner of the area used as a gravel source.
- Around 1986, part of the Albuquerque Veterans Administration (VA) Hospital was dismantled and the rubble from the building was dumped in the northern portion of the gravel pit and buried with clean fill, which was graded to form a roughly level surface. All asbestos associated with the rubble and the steam boilers were completely removed prior to burial. The purpose of the fence was to prevent contractors from salvaging buried scrap and to prevent any unauthorized dumping in the pit. The fence was erected shortly after the hospital debris was dumped and buried.
- After the fence was erected and the site topography was worked into its present condition, the KAFB Defense Evaluation Support Activity (DESA) unit used the fenced area as a storage yard for vehicles and test equipment. The DESA operations have since been transferred to another location. The exact time frame that DESA used the area is not known.
- Neither KAFB employee who was interviewed knew of any SNL/NM involvement (other than gravel excavation) or disturbance within the area of Site 7.

A statement made during the CEARP investigation by a retired SNL/NM employee was the basis for existence of Site 7. On October 9, 1985, this individual said during an interview:

"About 8 to 10 years ago, some poisonous gas cylinders were buried in a 6-to 8-foot pit about 3/4 of a mile south of Building 9966. They also dug a pit in the arroyo and buried about 300 cylinder bottles..." (DOE 1985).

In a conversation with this retired SNL/NM employee on December 6, 1994, the following clarifications were obtained:

¹ Apparently the KAFB personnel did not know of gravel operations between 1973 and 1980.

- About 300 gas cylinders were buried in an arroyo located south of the Thunder Range test area, approximately 1.5 miles south of Building 9965². The gas cylinders were placed in the pit that was 6-to 8-feet deep and the retired employee was instructed to perforate each cylinder using explosive charges and allow the gas in the cylinders to escape.
- Absolutely no gas cylinders were ever buried in the portion of Arroyo del Coyote located west of the intersection of Pennsylvania Avenue and the TA III access road. This area of the arroyo includes ER Sites 7 and 16. No gas cylinders were ever buried along the entire length of Arroyo del Coyote.

4. Conclusion

Based upon the evidence cited above, ER Site 7 has never contained constituents of concern. Therefore, ER Site 7 is recommended for an NFA determination.

5. References

5.1 ER Site References

Department of Energy (DOE), Albuquerque Operations Office, October 1985, Interviews with current and retired SNL/NM personnel, conducted by personnel from the Los Alamos National Laboratory in support of the Comprehensive Environmental Assessment and Response Program.

KAFB Employees 1994a, Telephone conversation with Eric Larsen of SNL/NM Department 7582 on October 17, 1994.

KAFB Employees 1994b, Meeting at KAFB Environmental Services Office with Jim Brinkman (SNL/NM Department 7582), Marlene Hyde (Lamb and Associates), Paul Darr (R.F. Weston, Inc.), David Hunter (Lamb and Associates), Eric Larsen, (SNL/NM Department 7582) on November 2, 1994.

U.S. Environmental Protection Agency (EPA), August 1993. "Module IV of RCRA Permit No. NM 5890110518, EPA Region VI," issued to Sandia National Laboratories, Albuquerque, New Mexico.

U.S. Environmental Protection Agency (EPA), August 1992. "Hazardous Waste Management Facility Permit No. NM5890110518, EPA Region VI," issued to Sandia National Laboratories, Albuquerque, New Mexico.

² The location appears to be relative to Building 9965 rather than Building 9966. Now the location of the alleged buried cylinders is designated as Site 6A.

U.S. Environmental Protection Agency (EPA), July 1990. "Corrective Action for Solid Waste Management Units (SWMU) at Hazardous Waste Management Facilities, Proposed Rule," *Federal Register*, Vol. 55, Title 40, Parts 264, 265, 270, and 271.

5.2 Reference Documents

Department of Energy (DOE), Albuquerque Operations Office, Environmental Safety and Health Division, Environmental Program Branch, September 1987, draft "Comprehensive Environmental Assessment and Response Program (CEARP) Phase I: Installation Assessment, Sandia National Laboratories, Albuquerque, New Mexico."

Sandia National Laboratories/New Mexico (SNL/NM), August 1994. "Environmental Restoration Project Information Sheet for Site 7, Gas Cylinder Disposal (Arroyo del Coyote)," Sandia National Laboratories, Albuquerque, New Mexico.

Sandia National Laboratories/New Mexico (SNL/NM), February 1994. Draft "Program Implementation Plan for Albuquerque Potential Release Sites," Albuquerque, New Mexico.

U.S. Environmental Protection Agency (EPA), April 1987. "Final RCRA Facility Assessment Report of Solid Waste Management Units at Sandia National Laboratories, Albuquerque, New Mexico," Contract No. 68-01-7038, EPA Region VI.

U.S. Environmental Protection Agency (EPA), October 1986. "RCRA Facility Assessment Guidance," EPA/530-86-053, PB87-107769, Washington, D.C.

5.3 Aerial Photographs

Ebert and Associates, November 1994. "Photo-Interpretation and Digital Mapping of ER Sites 7, 16, 45, and 228 from Sequential Historical Aerial Photographs," for Sandia National Laboratories, Albuquerque, New Mexico.

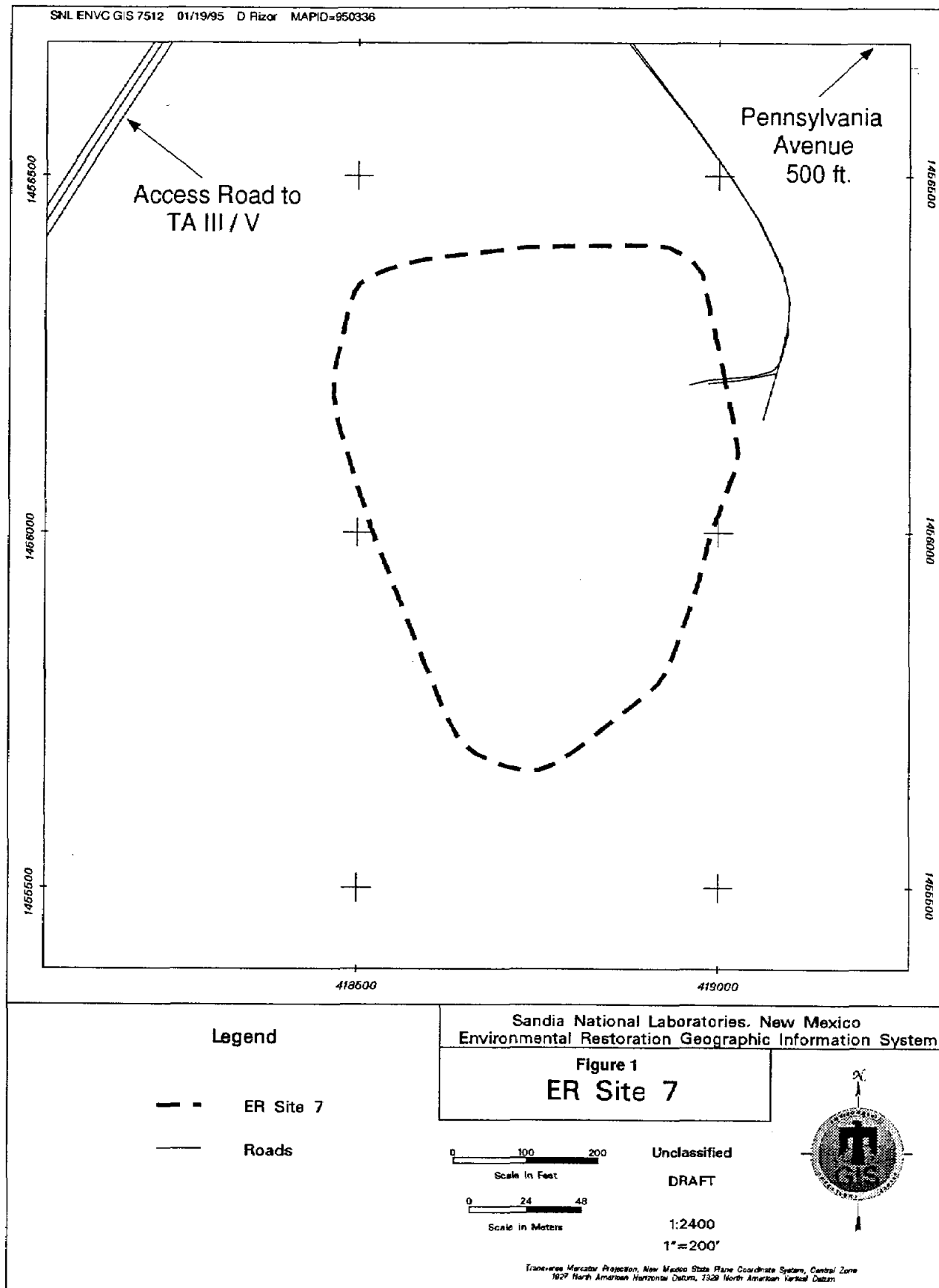


Figure 1. Map Showing Location of ER Site 7